Claims:

1. A multilayer composite, comprising:

the following layers bound directly to one another:

a layer I of a polyamide molding composition;

a layer II of a bonding agent comprising at least 50% by weight of a mixture of

a) from 30 to 70 parts by volume of a polymer selected from the group consisting of a polyamide, a polyamine-polyamide copolymer and a combination thereof; wherein said polyamine-polyamide copolymer is prepared using the following monomers:

α) from 0.1 to 25% by weight, based on the polyamine-polyamide copolymer, of a polyamine containing at least 3 nitrogen atoms, and

β) a polyamide-forming monomer selected from the group consisting of a lactam; a ω-aminocarboxylic acid; an equimolar combination of a diamine and a dicarboxylic acid; and a mixture thereof,

b) from 0.1 to 70 parts by volume of an olefin polymer containing a functional group,

c) from 69.9 to 0 parts by volume of an unfunctionalized polyolefin,

wherein the sum of the parts by volume of a), b) and c) is 100; and

a layer III of a polyolefin molding composition.

2. The multilayer composite as claimed in Claim 1, wherein component a) in layer II contains at least 0.1 part by volume of the polyamine-polyamide copolymer.

3. The multilayer composite as claimed in Claim 1, wherein component a) in layer II contains at least 0.5 part by volume of the polyamine-polyamide copolymer.

4. The multilayer composite as claimed in Claim 1, wherein the polyamine-polyamide

copolymer is prepared using from 0.5 to 20% by weight of the polyamine.

5. The multilayer composite as claimed in Claim 1, wherein the polyamine-polyamide copolymer is prepared using from 1 to 16% by weight of the polyamine.

6. The multilayer composite as claimed in Claim 1, wherein the polyamine contains at least 4 nitrogen atoms.

7. The multilayer composite as claimed in Claim 1, wherein the polyamine contains at least 8 nitrogen atoms.

8. The multilayer composite as claimed in Claim 1, wherein the polyamine contains at least 11 nitrogen atoms.

9. The multilayer composite as claimed in Claim 1, wherein the polyamine has a number average molecular weight M_n of at least 146 g/mol.

10. The multilayer composite as claimed in Claim 1, wherein the polyamine has a number average molecular weight M_n of at least 500 g/mol.

11. The multilayer composite as claimed in Claim 1, wherein the polyamine has a number average molecular weight M_n of at least 800 g/ml.

12. The multilayer composite as claimed in Claim 1, wherein an amino group concentration of the polyamine-polyamide copolymer is in the range from 100 to 2500 mmol/kg

13. The multilayer composite as claimed in Claim 1, wherein the functional group of the olefin polymer is an acid anhydride group, a N-acyllactam group, a carboxylic acid group, an epoxide group, an oxazoline group, a trialkoxysilane group or a hydroxyl group.

14. The multilayer composite as claimed in Claim 1, wherein one of the layers I, II or III or an additional interior layer has been made electrically conductive.

15. The multilayer composite as claimed in Claim 1, which is in the form of a pipe.

16. The multilayer composite as claimed in Claim 15, which is fully or partially corrugated.

17. The multilayer composite as claimed in Claim 1, which is in the form of a hollow body.

18. The multilayer composite as claimed in Claim 15, wherein the outermost layer is adjoined by an additional elastomer layer.

19. The multilayer composite as claimed in Claim 1, which is in the form of a fuel line, a tank filling port, a vapor line, a filling station pipe, a station pipe, a coolant line, a pipe in an air conditioning unit, a line for clutch fluid, an air brake line, a windscreen washer pipe or a fuel container.

20. The multilayer composite as claimed in Claim 1, which is in the form of a film.

21. A molding composition, comprising:

at least 50% by weight of the following components:

a) from 30 to 70 parts by volume of a polymer selected from the group consisting of a polyamide, at least 0.1 part by volume of polyamine-polyamide copolymer and a combination of a polyamide and at least 0.1 part by volume of polyamine-polyamide copolymer;

wherein said polyamine-polyamide copolymer is prepared using the following monomers:

α) from 0.1 to 25% by weight, based on the polyamine-polyamide copolymer, of a polyamine containing at least 3 nitrogen atoms, and

β) a polyamide-forming monomer selected from the group consisting of a lactam; a ω-aminocarboxylic acid; an equimolar combination of a

diamine and a dicarboxylic acid; and a mixture thereof,

b) from 0.1 to 70 parts by volume of an olefin polymer containing a functional group,

c) from 69.9 to 0 parts by volume of an unfunctionalized polyolefin,

wherein the sum of the parts by volume of, a), b) and c) is 100.